

# Novel Mode of Operation for Interceptor Missiles Permitting Multiple Vehicle Kills Using Single Interceptor

13 September 2025

Simon Edwards

Research Acceleration Initiative

## Introduction

Particularly when defending against ICBM attack, the problem of not having sufficient numbers of interceptors to address the large numbers of decoy re-entry vehicles is one in need of a solution.

## Abstract

Given the extreme accuracy of Flash LiDAR-guided interceptors, it should be possible to utilize SM-6 interceptors used in midcourse interception according to a novel mode of operation in which, rather than using an explosive warhead to destroy ballistic missiles, a single interceptor is made to directly strike the guidance fins of a ballistic missile in order to cause it to fly off-course. Without detonating, the interceptor would, in this “ramming mode,” come about and move to strike other missiles’ guidance fins on successive passes.

Like Iron Dome, the missiles would be capable of coming about when a “miss” event happens, but, unlike Iron Dome, also capable of this when a successful hit against a fin is achieved. The thin, lightweight material composing guidance fins would cause negligible damage to the interceptor, provided it is reinforced to withstand repeated ramming attacks against the guidance fins of the incoming ballistic missiles.

Such an interception regime would require extreme precision in terms of the three-dimensional measurement of the ballistic missiles, reasonable bearing with regard to the ballistic missiles, flying roughly “with” the MIRV clusters and weaving laterally. Even if a single SM-6 could not disable all of the decoys associated with a single ICBM, the ability to take out three or four MIRVs using a single interceptor makes it more practical to disable all decoys using just a handful of SM-6s. Such an interception regime would require exceptional computational capacity in order to properly predict where something as small as a guidance fin will be and to mitigate both the risk of a total miss and a direct hit which would destroy the interceptor.

## Conclusion

This capability, particularly when coupled with other novel capabilities including helicized LASER ABM capacity and remote LASER-based power supply for space-based helical LASERs could greatly enhance overall effectiveness of the defensive ABM mesh.